Table A. Management requirements to reduce or prevent adverse effects by Tamarack Meadows Enhancement Project.

Potential Affected Resource(s)	Management Requirements Designed to Reduce or Prevent Adverse Effects	Responsible Person(s)
Heritage Resources	Heritage Resources will be designated on the ground prior to implementation of all project activities. Protect Heritage Resources that have been identified on the ground with flagging as well as those identified on maps provided by the District Archaeologist.	District Archaeologist
Heritage Resources	Management of Heritage Resources: Protect all Heritage Resources with flagged control areas. Utilize directional felling methods as appropriate to protect heritage resources. Buffer zones may be designated to ensure added protection. Sale Administrator, Contract Inspector, and/or Archaeologist will walk all sites with purchaser, contractor, or force account staff prior to start of project activities.	District Archaeologist
Heritage Resources	Management of Linear Heritage Resources: Directionally fell trees parallel to or away from linear Heritage Resources (trails, ditches, roads etc.); existing breaches will be used whenever possible; if necessary, new breaches will be designated by the District Archaeologist; and isolated trees inside of linear Heritage Resource features may be felled on a case-by-case basis and with on-the-ground approval of the District Archaeologist.	District Archaeologist
Heritage Resources	Guidelines 2.1(a) for approved Standard Protection Measures established in the 2018 Regional Programmatic Agreement Regarding Compliance with Section 106 of the National Historic Preservation Act. Linear sites (e.g., historic trails, roads, railroad grades, ditches) may be crossed or breached by equipment in areas where their features or characteristics clearly lack historic integrity (i.e., where those portions do not contribute to site eligibility or values). (1) Crossings are not to be made at the points of origin, intersection, or terminus of linear site features. (2) Crossings are to be made perpendicular to linear site features. (3) The number of crossings is to be minimized by project and amongst multiple projects in the same general location. (4) The remainder of the linear site is to be avoided, and traffic is to be clearly routed through designated crossings.	District Archaeologist
Heritage Resources	Guidelines 2.1(b) for approved Standard Protection Measures established in the 2018 Regional Programmatic Agreement Regarding Compliance with Section 106 of the National Historic Preservation Act. Accumulation of sufficient snow over archaeological deposits or historic features to prevent surface and subsurface impacts. Undertaking activities may be implemented over snow cover on historic properties under the following conditions: (1) The cover must have at least 12 inches depth of compacted snow or ice throughout the duration of	District Archaeologist

Potential Affected Resource(s)	Management Requirements Designed to Reduce or Prevent Adverse Effects	Responsible Person(s)
	undertaking activities on sites. (2) All concentrated work areas (e.g., landings, skid trails, turnarounds, and processing equipment sites) shall be located prior to snow accumulation and outside historic property boundaries.	
Heritage Resources	Guidelines 2.1(c) for approved Standard Protection Measures established in the 2018 Regional Programmatic Agreement Regarding Compliance with Section 106 of the National Historic Preservation Act. Placement of foreign, non-archaeological material (e.g., padding or filter cloth) within transportation corridors (e.g., designated roads or trails, campground loops, boat ramps, etc.) over archaeological deposits or historic features to prevent surface and subsurface impacts caused by vehicles or equipment. Such foreign material may be utilized on historic properties under the following conditions: (1) Engineering will design the foreign material depth to acceptable professional standards; (2) Engineering will design the foreign material use to assure that there will be no surface or subsurface impacts to archaeological deposits or historic features; (3) The foreign material must be easily distinguished from underlying archaeological deposits or historic features; (4) The remainder of the archaeological site or historic feature is to be avoided, and traffic is to be clearly routed across the foreign fill material; and (5) The foreign material must be removable should research or other heritage need require access to the archaeological deposit or historic feature at a later date.	District Archaeologist
Heritage Resources	Guidelines 2.2(a) for approved Standard Protection Measures established in the 2018 Regional Programmatic Agreement Regarding Compliance with Section 106 of the National Historic Preservation Act. Felling and removal of hazard, salvage, and other trees within historic properties under the following conditions: (1) Trees may be limbed or topped to prevent soil gouging during felling; (2) Felled trees may be removed using only the following techniques: hand bucking, including use of chain saws, and hand carrying, rubber tired loader, crane/self-loader, helicopter, or other non-disturbing, HPM-approved methods; (3) Equipment operators shall be briefed on the need to reduce ground disturbances (e.g., minimizing turns); (4) No skidding nor tracked equipment shall be allowed within historic property boundaries; and (5) Where monitoring is a condition of approval, its requirements or scheduling procedures should be included in the written approval.	District Archaeologist

Potential Affected Resource(s)	Management Requirements Designed to Reduce or Prevent Adverse Effects	Responsible Person(s)
Heritage Resources	Guidelines 2.2(b) for approved Standard Protection Measures established in the 2018 Regional Programmatic Agreement Regarding Compliance with Section 106 of the National Historic Preservation Act. For fire, and hazardous fuels and vegetation management projects, HPM/DHPS, in conjunction with fuels, vegetation management, or fire specialists as necessary, shall develop treatment measures for *at risk* historic properties (as defined in SHPO approved Region 5 modules and agreements) designed to eliminate or reduce potential adverse effects to the extent practicable by utilizing methods that minimize surface disturbance, and/or by planning project activities in previously disturbed areas or areas lacking cultural features. (1) The following standard protection measures apply to fire, hazardous fuels, and vegetation management projects: (I) Mechanically treated (crushed/cut) brush or downed woody material may be removed from historic properties by hand, through the use of off-site equipment, or by rubber-tired equipment approved by HPMs or qualified Heritage Program staff. Ground disturbance shall be minimized to the extent practicable during such removals. (J) Woody material may be chipped within the boundaries of historic properties so long as the staging of chipping equipment on-site does not affect historic properties and staging areas are specifically approved by HPMs or qualified Heritage Program staff. (K) HPMs shall approve the use of tracked equipment to remove brush or woody material from within specifically identified areas of site boundaries under prescribed measures designed to prevent or minimize effects. Vegetative or other protective padding may be used in conjunction with HPM authorization of certain equipment types within site boundaries.	District Archaeologist
Heritage Resources	Logging Camps: Proposed logging camps and other staging areas need to be agreed upon with the District Archaeologist prior to use.	District Archaeologist
Lands	Protect land survey signs and monuments, even if burned, or laying on the ground.	Public Service Officer
Non-native Invasive Plants (NNIP) - Prevention	Ensure that all plant material and fill material used for erosion control and/or road maintenance is free of NNIP, including straw, mulch, gravel, and rock (*certified weed-free*).	Botanist
Non-native Invasive Plants (NNIP) - Prevention	Clean all off-road equipment entering the project area if it may be coming from areas infested with nonnative invasive plants (NNIP).	Botanist

Potential Affected Resource(s)	Management Requirements Designed to Reduce or Prevent Adverse Effects	Responsible Person(s)
Silviculture	Hand Cutting, Piling, and Burning. 1. Leaner's/Hang-ups - No contractor created slash shall be left suspended by, or lean against, a leave tree; whether it is dead or alive. 2. Lopping and Scattering: Slash shall be lopped and scattered away from the bole of residual leave trees so that it lies outside of the drip line. 3. Piling and burning: Piles shall be placed away from residual leave trees to avoid being scorched during burning. Piles cannot be located on or against stumps and logs.	Silviculturist
Fire and Fuels	Activity Generated Slash adjacent to FS roads. Pile all activity generated slash 100' depth of project area and covered with waterproof covering for burning during winter months. Piling and Burning Landings: Landings created for optimal winter weather burning. Waterproof covering on multiple locations of pile. Landing Temp Roads: Landings created for burning need to have roads accessible for fire engine access during ignition and monitoring phases. Landing Placement: Landing can scorch and burn live trees 50-100 feet in distance. Landing Fire Lines: 6-10-foot fire line created around each landing.	Fuels Implementation Team
Road Maintenance and Safety	Protect all improvements along roadways including road surface, signs, ditches, and drainage structures.	Maintenance Engineer
Watershed and Soils	To reduce ground disturbance created by equipment within RCAs, vary the routes the equipment uses and minimize turning of equipment.	Hydrologist
Watershed, Soils, and Aquatic Resources	Allow mechanical operations only when soil moisture conditions are such that compaction, gullying, and/or rutting will be minimal. Conduct ground based mechanical operations when soil is dry; that is, in the spring when soil moisture in the upper 8 inches is not sufficient to allow a soil sample to be squeezed and hold its shape, or will crumble when the hand is tapped. In the summer and early fall after storm event(s) when soil moisture between 2-8 inches in depth is not sufficient to allow a soil sample to be squeezed and hold its shape or will crumble when the hand is tapped. Off of designated skid trails, limit all equipment passes over the same piece of ground to reduce the potential for adverse soil compaction.	Hydrologist
Watershed and Soils	Log Landings: re-use log landings to the extent feasible. Limit new landings to ¼ to ½ acre in size.	Hydrologist
Watershed, Soils, and Aquatic Resources	To reduce the potential for adverse cumulative watershed effects, implement state certified Best Management Practices (BMPs). Site specific BMPs applicable to this project (located in project record file) include BMP 1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 1.8, 1.9, 1.10, 1.11, 1.12, 1.13, 1.14, 1.15, 1.16, 1.17, 1.19, 1.20, 1.21, 2.2, 2.3, 2.4, 2.5, 2.6, 2.8, 2.11,	Hydrologist

<table>
<tr><th>Potential Affected Resource(s)</th><th>Management Requirements Designed to Reduce or Prevent Adverse Effects</th><th>Responsible Person(s)</th></tr>
<tr><td></td><td>5.1, 5.2, 5.4, and 5.6.</td><td></td></tr>
<tr><td>Watershed, Soils and Aquatic Resources</td><td>Implementation buffers for hydrologic features. See table below.</td><td>Hydrologist</td></tr>
<tr><td colspan="3">
<table>
<tr><th rowspan="2">Stream Type</th><th colspan="2">Equipment Exclusion Zone (EEZ) for Salvage, Yarding, and Machine Piling of Slash[1]</th><th rowspan="2">Mastication</th><th rowspan="2">Underburn[2]</th><th rowspan="2">Hand Cut[3]</th><th rowspan="2">Minimum Distance to Burn Piles</th></tr>
<tr><th>Slope <35%</th><th>Slope >35%</th></tr>
<tr><td>Perennial streams</td><td>100 feet</td><td>Excluded</td><td>50 feet</td><td>150 feet</td><td>No buffer</td><td>25 feet</td></tr>
<tr><td>Intermittent streams</td><td>100 feet</td><td>Excluded</td><td>50 feet</td><td>150 feet</td><td>No buffer</td><td>25 feet</td></tr>
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<tr><td>Special Aquatic Features (Reservoirs, wetlands, fens, and springs)</td><td>100 feet</td><td>Excluded</td><td>50 feet</td><td>150 feet</td><td>Perimeter</td><td>25 feet</td></tr>
<tr><td>Riparian Features: dry meadows, seasonal wetlands</td><td>0 to 25[4]feet</td><td>Excluded</td><td>25 feet</td><td>150 feet</td><td>Perimeter</td><td>25 feet</td></tr>
</table>
1. Fell trees away from the stream.
2. Prescribed burning would be allowed within RCAs, but there would be no ignitions in riparian vegetation. Fire may back through this zone.
3. May hand cut within RCA feature but don't cut riparian vegetation. Don't cut vegetation that provides stream bank stabilization. Adhere to the minimum distance for burn piles. No hand cutting within special aquatic features and riparian features unless marked by hydrologist and/or biologist.
4. Meadows may have no buffer to a 25 ft. buffer depending on the individual meadow. Buffers may vary due to the condition of the meadow (i.e. meadow is encroached with trees).
</td></tr>
<tr><td>Watershed, Soils, and Aquatic Resources</td><td>Mechanical equipment will be permitted within designated Riparian Conservation Areas (RCAs), but would not be allowed to enter the mechanical equipment exclusion zones (EEZs) for the purpose of removing timber.

Mechanical equipment will be allowed to reach into the RCA's EEZs with the extendable boom arm without disturbing the ground for the purpose of removing timber.

Where mechanical equipment is used to fell timber within RCAs, one-end suspension would be used to remove felled timber where feasible. If one-end suspension is not feasible, endlining would be permitted. Excessive soil displacement (i.e., 'furrowing') caused by endlining would be mitigated or repaired by the operator.

Hand felling and removal of material in a manner that will not cause soil disturbance within the mechanical equipment exclusion zones of the RCAs would be permitted.

Riparian species (aspen, cottonwood, alder, willow, dogwood, etc.) would generally not be cut or removed unless needed for operations and/or safety.

Trees that provide bank stability and/or contribute to channel integrity would not be felled unless they pose a safety risk, in which case they would be felled and left in place.

Mechanical equipment would be allowed to enter EEZs for the purpose of crossings streams but would be limited and</td><td>Hydrologist</td></tr>
</table>

Potential Affected Resource(s)	Management Requirements Designed to Reduce or Prevent Adverse Effects	Responsible Person(s)
	designated by a qualified specialist prior to implementation. Following use of these specified crossings, a qualified specialist would assess the site for potential repair and/or rehabilitation as needed for stream stabilization.	
Watershed and Soils	Limit tractor skidding to less than 35 percent slopes unless a watershed specialist evaluates operations on the steeper slopes. Tractor skidding may occur on slopes greater than 35 percent only in short pitches less than 200 feet in distance.	Hydrologist
Watershed and Sols	If stream crossing is requested for removing fell trees the crossing needs to be approved by District Hydrologist.	Hydrologist
Wildlife	Incidental detections of federally listed and sensitive species prior to or during project implementation will be reported to the District Wildlife Biologist for protection in accordance with management direction for the Plumas National Forest.	Wildlife Biologist
Wildlife	Leave additional large snags (> 4/acre) where possible to mitigate effects for bats and woodpeckers.	Wildlife Biologist
Wildlife	If species are found prior or during project activities: Follow Standard Provisions C6.24 & C8.2 B6.24 Site Specific Special Protection Measures – Wildlife Protection Measures CT6.313 Limiting Operating Periods & Forest Service manual (FSM) 2670.32 and 2670.22.	Wildlife Biologist
Aquatic	Follow RCAs and RCOs as documented by the District Hydrologist above.	Wildlife Biologist